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Patent
270/070

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

LANGENFELD, John

Serial No.: 10/044,716

Filed: January 11, 2002

For: BONE MORPHOGENETIC
PROTEIN-2 IN THE TREATMENT AND
DIAGNOSIS OF CANCER

Group Art Unit: 1645

Examiner: To Be Assigned

TRANSMITTAL OF FORMAL DRAWINGS

Attention: Official Draftsperson
Commissioner for Patents
Washington, D.C. 20231

Sir:

Transmitted herewith for filing in the above-referenced application are the formal drawings (15 sheets), as required by the Notice to File Missing Parts dated March 14, 2002.

Respectfully submitted,
LYON & LYON LLP

Dated: 5/14/02

By: Michael J. Wise
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LA-231423.1

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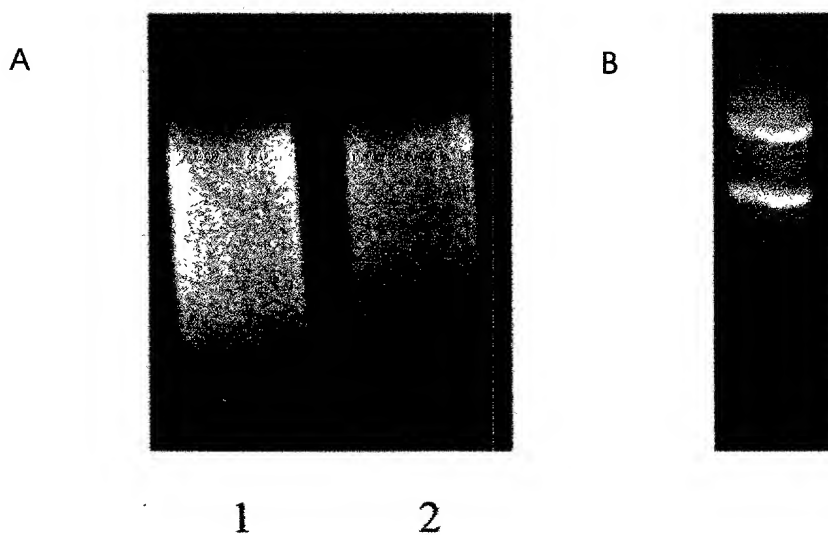
I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as First Class Mail in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231.

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Melody K Gutierrez

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C

1. Alpha-1-antitrypsin
2. Bone Morphogenetic Protein 2
3. Cytokeratin 6
4. Lambda Light Chain

Fig. 1

10044716.051702

02/15

RT-PCR for BMP-2 in Human Lung Tumors

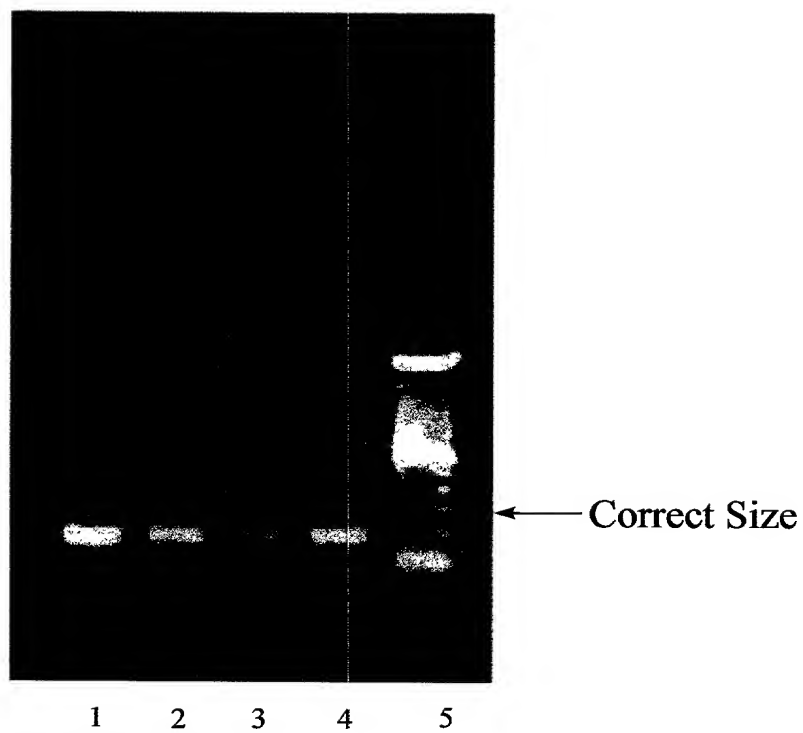


Fig. 2

03/15

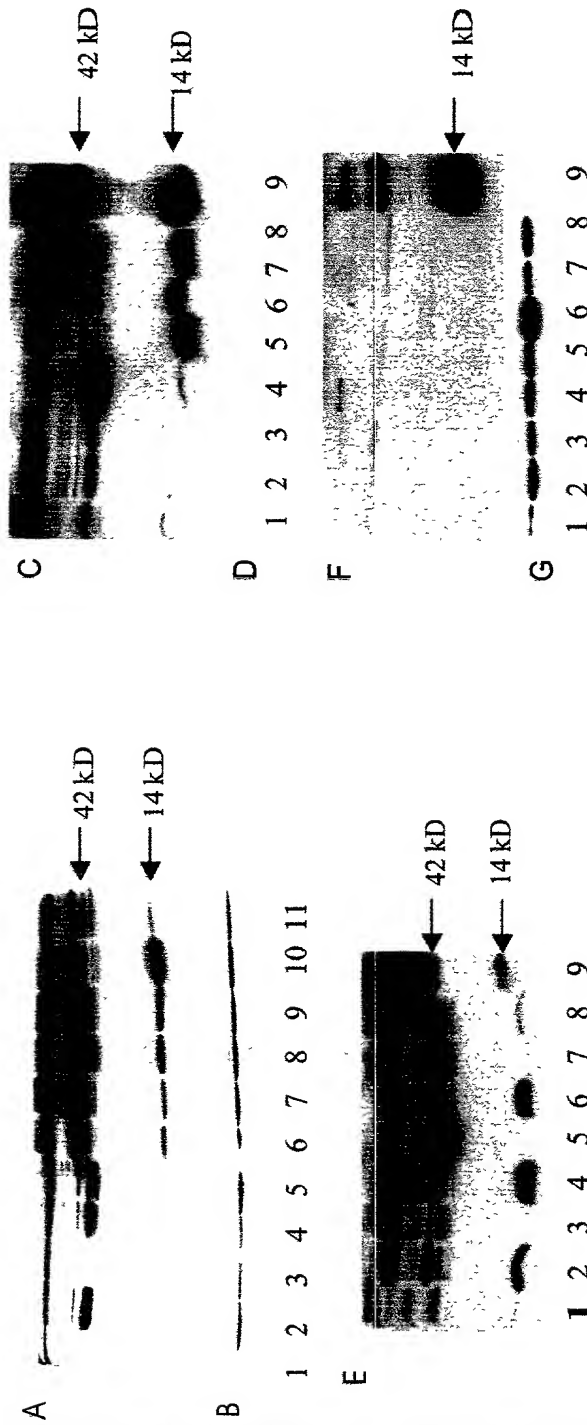


Fig. 3

04/15

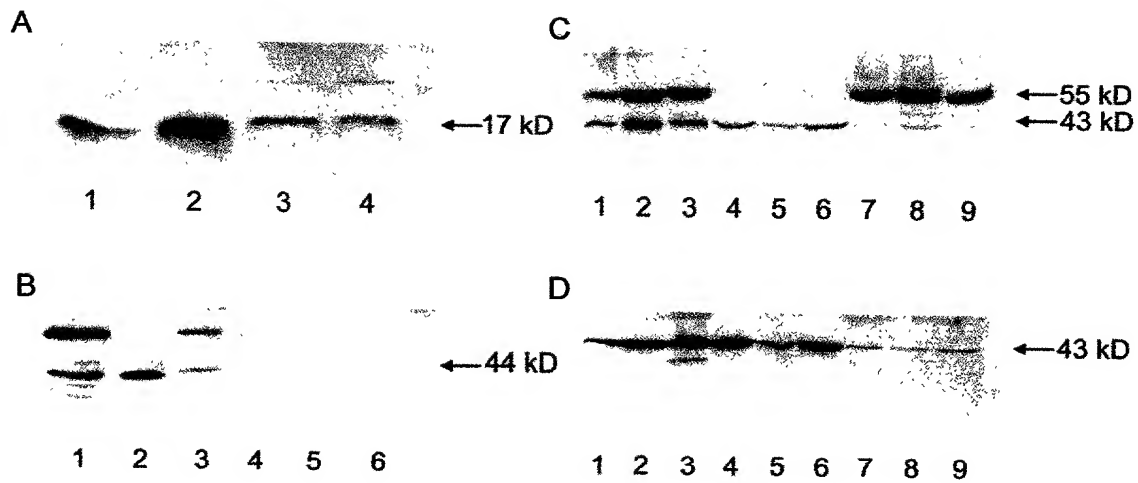


Fig. 4

05/15



10044716.051702

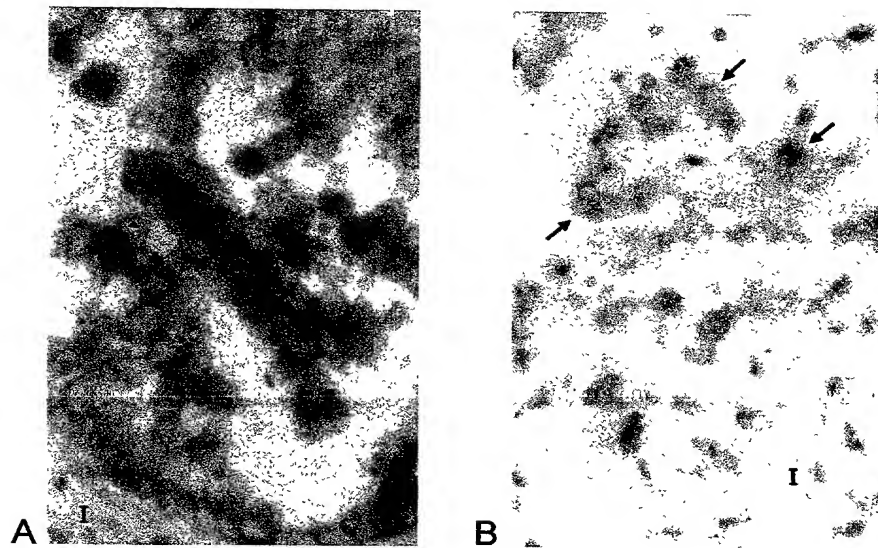


Fig. 5

06/15

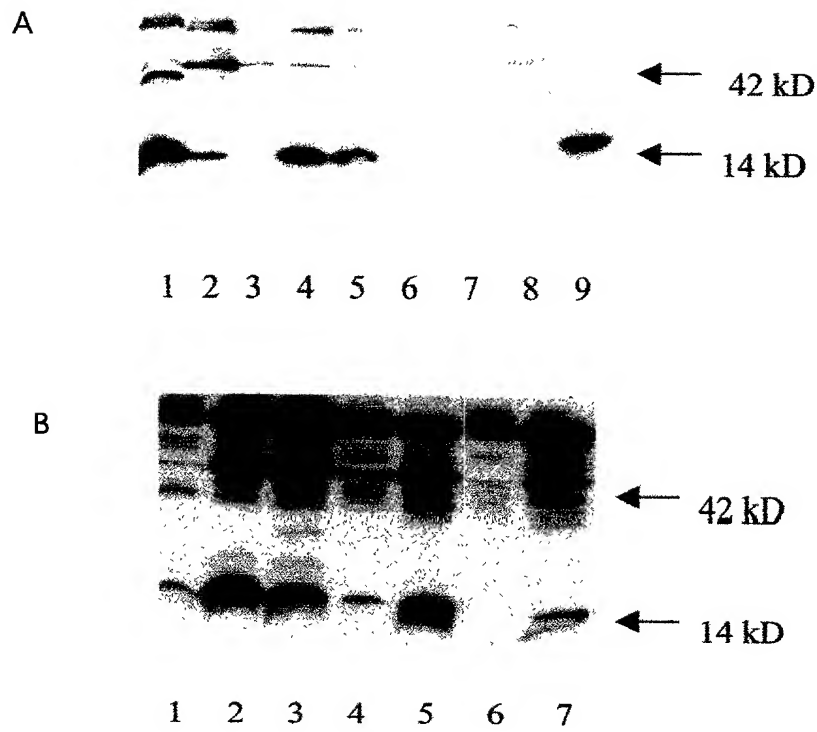


Fig. 6

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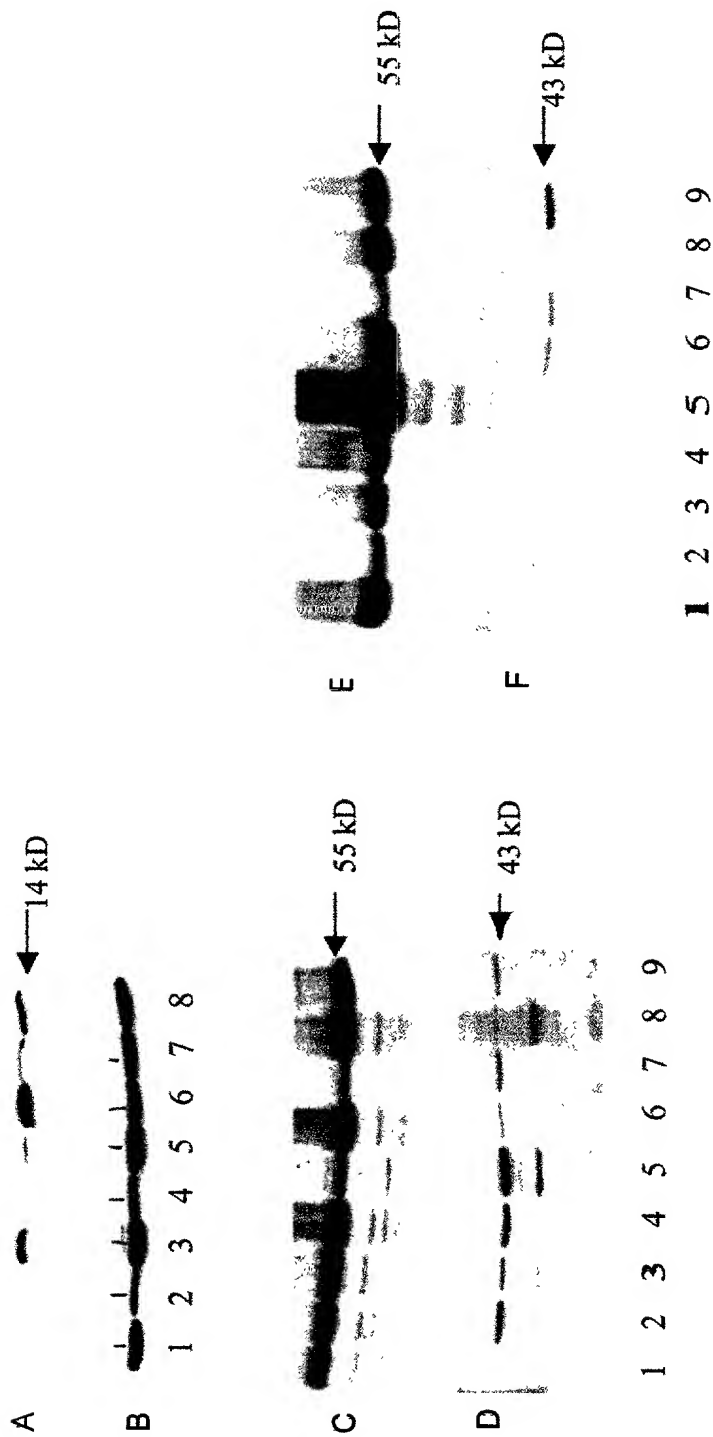
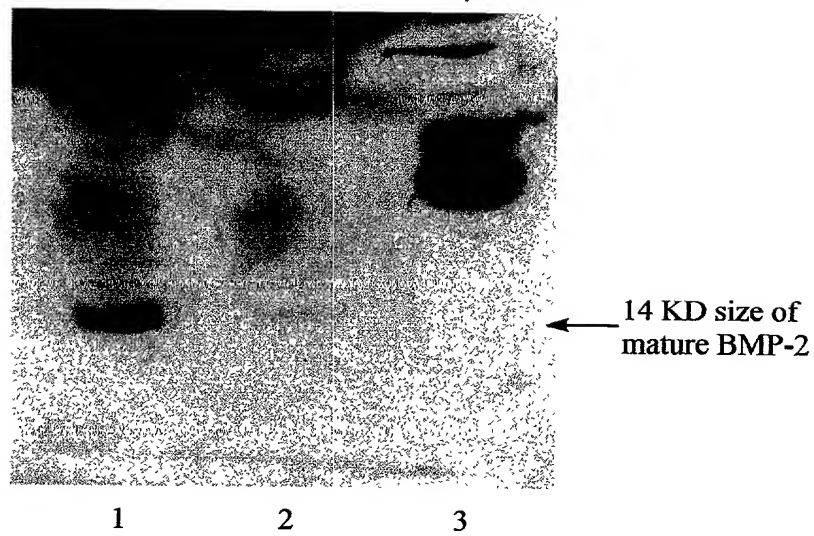


Fig. 7

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Western Blot of Serum
Samples of Lung Cancer Patients

Fig. 8

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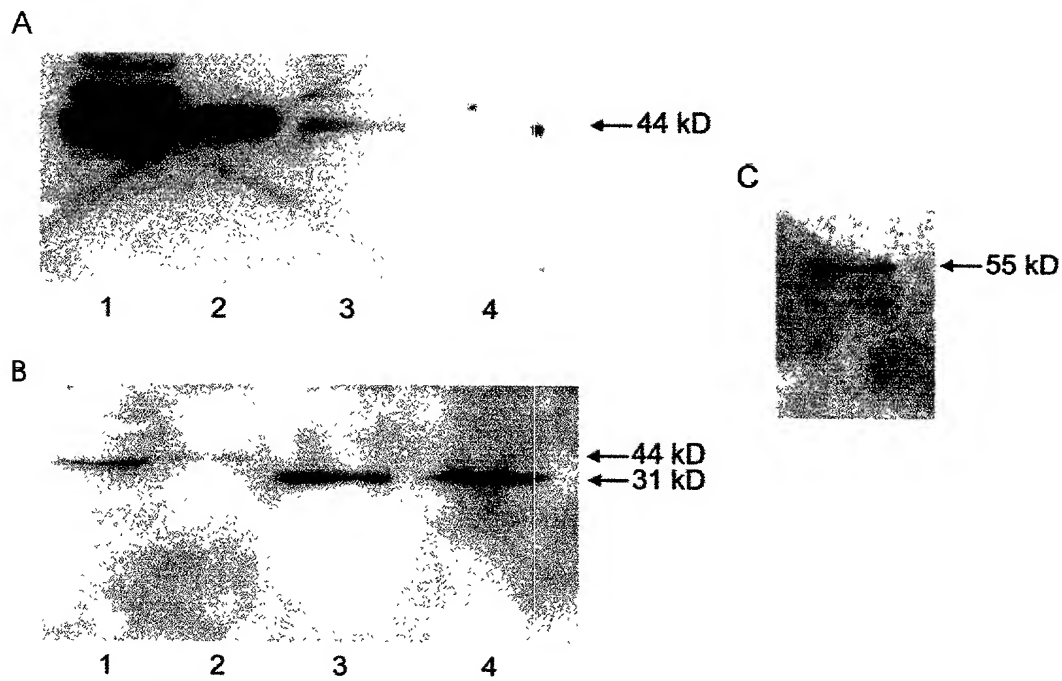


Fig. 9

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BMP-2 ENHANCES BLOOD
FORMATION COMPARED TO
CONTROLS

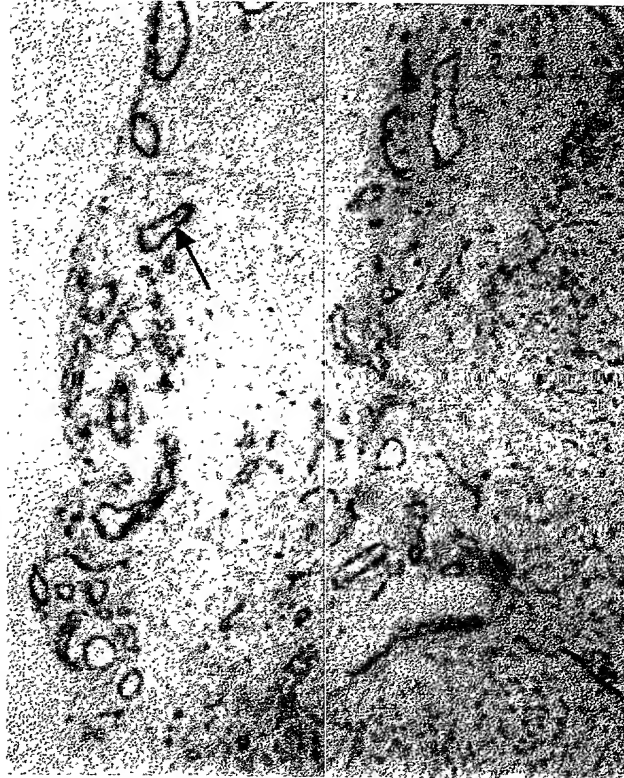
Fig. 10

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BMP-2 ENHANCES TUMOR VASCULATURE



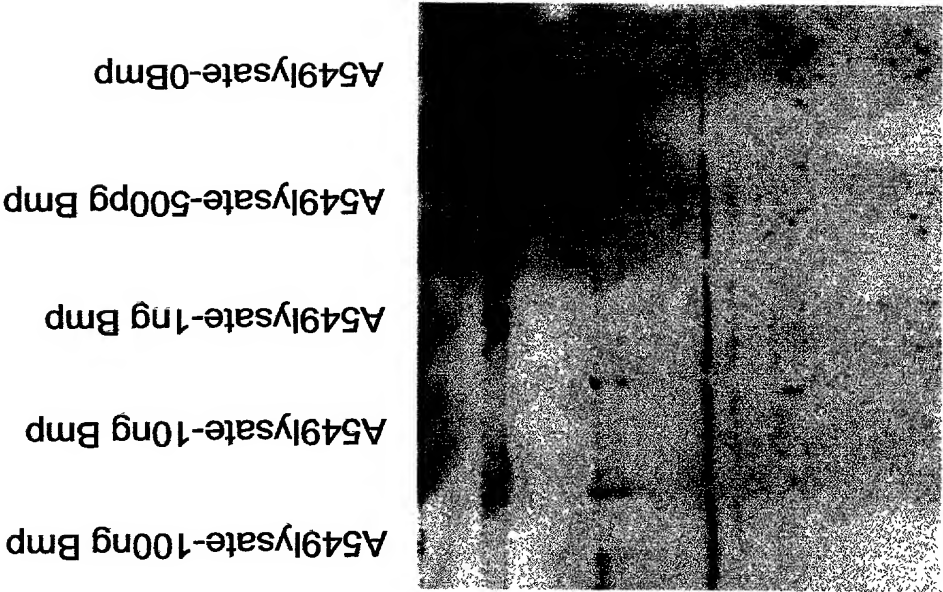
CONTROL



BMP-2 TREATED

Fig. 11

BMP-2 REGULATES SONIC HEDGEHOG



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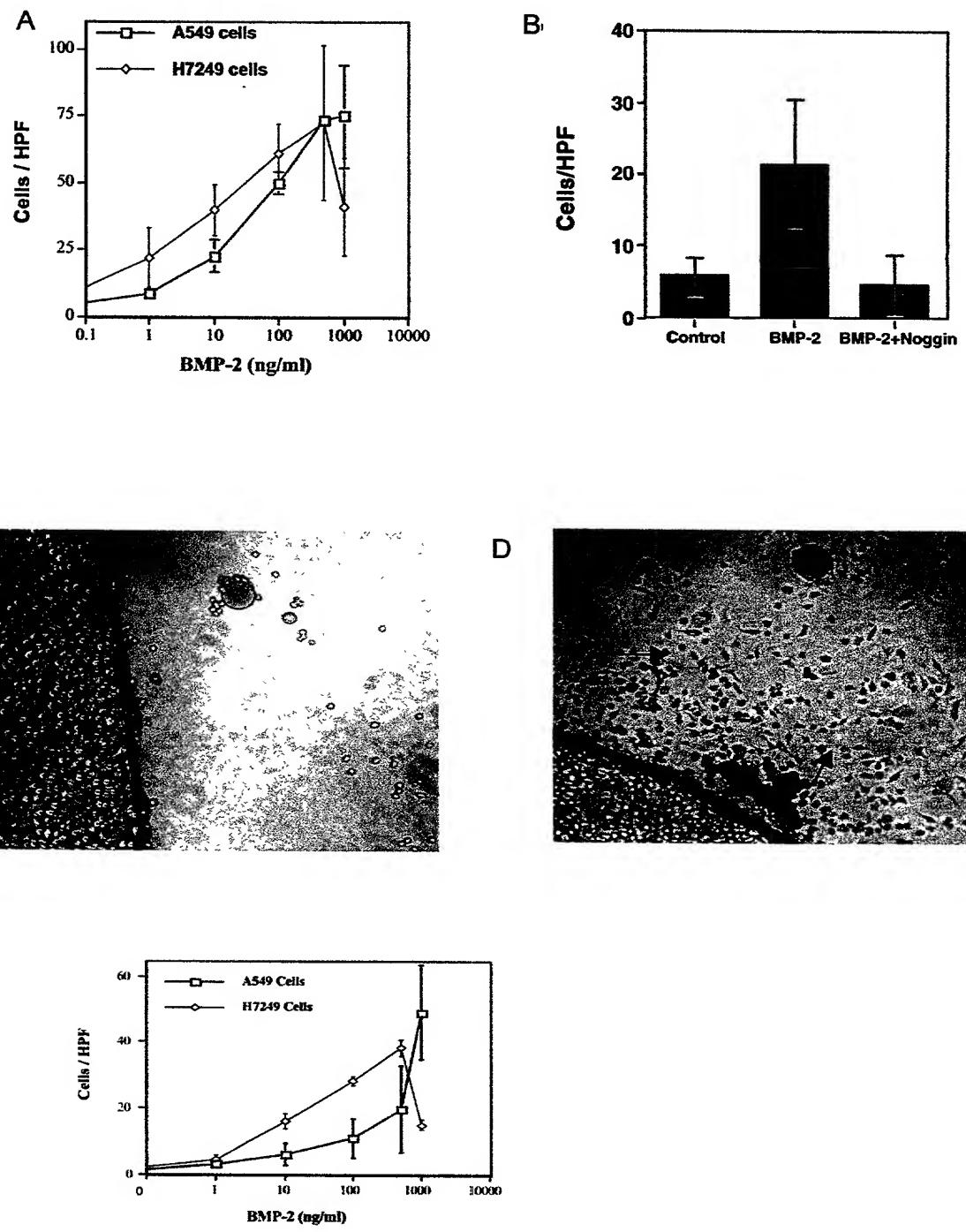
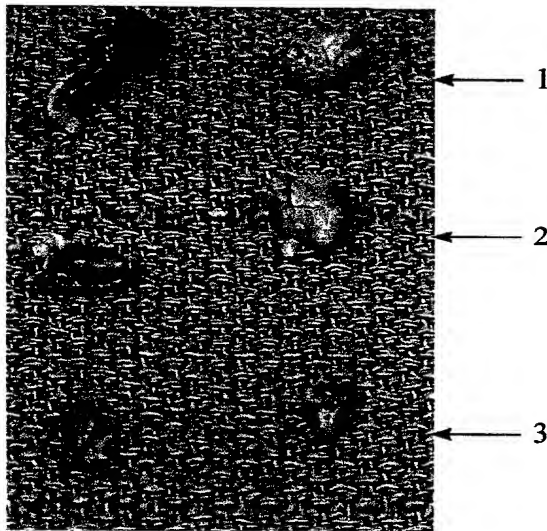


Fig. 13

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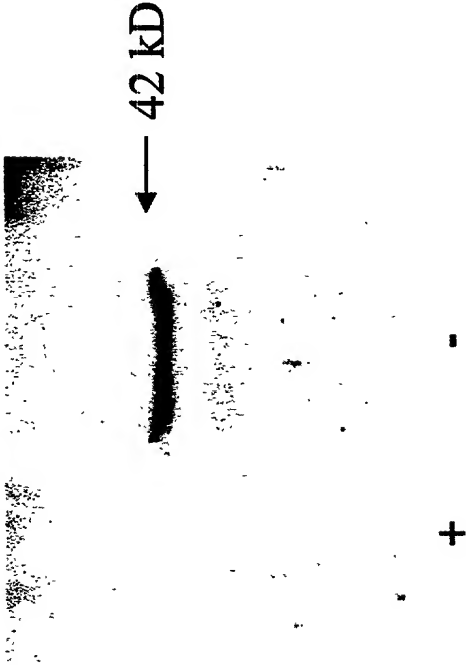
control	BMP-2	noggin
100	149±22*	42±4.5*

Table #1: BMP-2 enhances tumor growth, while inhibition of BMP-2 decreases tumor growth. Data is reported as the mean \pm SEM percentage of control. Data was analyzed by one way ANOVA and Newman-Keuls test (* $p < .05$).

Fig. 14

NOGGIN INHIBITS VEGF EXPRESSION IN THE
A549 LUNG CANCER CELL LINE

A. Western Blot



B. ELISA

	Secreted VEGF (ng/ml)
A540 + PBS	13,333
A549 + 300 ng/ml noggin	9,442
A549 + 500 ng/ml noggin	8,219

Fig. 15